SOHO : MAGNETO-SEISMOLOGY OF THE SOLAR INTERIOR, ATMOSPHERE AND CORONA: FROM SOHO, TRACE TO SOLAR-B, SDO AND BEYOND

PROPOSERS:

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TITLE:

SOHO: Magneto-seismology of the solar interior, atmosphere and corona: from SOHO, Trace to Solar-B, SDO and beyond

http://www.....

TIME:

Late Spring or Summer 2008

VENUE:

Town: **Wrocław** (Poland)

OBJECTIVE OF THE MEETING:

Observational data obtained by SOHO and TRACE have provided with a wealth of information about oscillations, waves and small scale dynamic events in the solar atmosphere, fostering many theoretical developments. Recent observations have led to discovery of close links between photospheric, atmospheric and coronal oscillations, suggesting that the photospheric oscillations may leak into the upper atmosphere in magnetic regions and cause dynamic coronal phenomena. The oscillation data are used by helioseismology and coronal magneto-seismology to investigate the properties of sub-photospheric and coronal structures, and initial attempts are made to seismologically probe the chromospheric and transition region layers. By 2008, new high-resolution data from SOLAR-B (and possibly from SDO) will be available. This data will open new opportunities for studying the physics of solar oscillations and developing new seismic diagnostics, from the sub-photosphere to corona. Owing to this notable extensive and intensive development in observations and theory, time is now ripe for a joint SOHO – TRACE - Solar-B - SDO workshop focused on waves, oscillations, small scale transient events and heating in the solar atmosphere. The aim of the Meeting is to bring together specialists in oscillations and wave propagations in all solar regions: interior, photosphere, chromosphere, transition region, corona and solar

wind, helio- and atmospheric seismologiests, experts in numerical MHD modelling and data analysis, and to take stock on where we stand and identify key opportunities and challenges for a future development in this rapidly expanding field of solar MHD wave studies. While each evenly numbered SOHO meeting is devoted to helioseismology the proposed topics provide excellent opportunities for brain-storming involving a more general solar physics community, and for developing new cross-disciplinary approaches, which will also be very important for new solar missions, like Solar-B, SDO and Solar Orbiter.

FORMAT OF THE MEETING:

The meeting will cover 8 topical, non-parallel sessions, covering the solar oscillations and wave phenomena and small scale dynamic events from the surface of the Sun to the solar wind (see "Tentative scientific programme" below). There will be invited talks of 40 minutes long, contributed oral presentations of 20 minutes and posters. All posters will be presented throughout the whole meeting in separate rooms, leaving plenty of time to view and discuss them. Topical poster sessions will be scheduled also with possible introductions and summaries presented by commentators.
The Scientific Sessions will start on XX.XX at 14h00 and end on XX.XX+5 days. There will be an informal Welcome Refreshment on Sunday evening 19h00 and a Welcome Reception on Monday evening and a Conference Dinner on Thursday night.

TENTATIVE SCIENTIFIC PROGRAMME

The Sessions will be devoted to the topics of waves, oscillations and small scale transient events in the different layers and structures of the solar atmosphere, and the invited talks and oral contributions of the Meeting will be distributed in such a way to obtain a healthy *balance between helioseismology and atmospheric seismology contributions*. Poster sessions will give plenty of opportunities to complement the invited reviews and contributed talks. Invited talks will be given by senior scientists while preference will be given to young researchers for oral contributions.

Session Theory of MHD waves

Session Numerical methods for MHD

Session Global solar oscillations and magnetic fields

Session MHD waves and oscillations in photospheric structures

Session Lower solar atmospheric seismology: Wave phenomena in the chromosphere and transition region

Session Waves and oscillations in open magnetic structures

Session Waves in the solar corona

Session Waves in the solar wind

Session Instabilities, non-MHD wave phenomena, wave-triggered eruptive events

Session Data analysis methods for wave and oscillation phenomena

The final list of Sessions is to be discussed with SOC.

CONFERENCE FEE

There will be a conference fee of 250 - 300 EUR, allowing admission to all scientific sessions, the conference dinner, coffee breaks, conference material, Welcome Refreshments and Welcome Reception.

CALENDAR OF EVENTS:

Preliminary registration deadline:
Second Announcement with Preliminary Scientific Program:
Grant application deadline:
Abstracts submission deadline:
Registration deadline:
Hotel reservation deadline:
Final Announcement with Scientific Programme:

PUBLICATION OF PROCEEDINGS:

ESA SP

ACCOMMODATION:

The conference will be held in Wrocław, Poland. Wrocław is one of the most beautiful and oldest cities in Poland, very important economical, cultural and educational center. It can be easily reached by train, by car (highway to Germany) and by plane (Mikołaj Kopernik Airport). A number of excellent hotels with well-equipped conference centers are available in Wroclaw. The conference can be hosted in a mid-size hotel with a conference room for 250 persons located close to the Astronomical Institute of the University of Wrocław in famous Szczytnicki Park or in one of numerous 3, 4 or 5 stars hotels with conference centers located in the city center.

SCIENTIFIC ORGANISING COMMITTEE: (tbc!)

Markus Aschwanden (LMSAL, USA), Jose Luis Ballester (Spain), Matts Carlsson (Norway), Werner Curdt (MPAe, Germany), Bart De Pontieu (Co-Chair, LMSAL, USA), Robert Erdelyi (Chair, UK), Berhard Fleck (ESA), Laurant Gizon (MPI, Germany), Joe Gurman (GSFC, US), Richard Harrison (RAL, UK)), Rony Keppens (KUL, Belgium), John L. Kohl (CfA, USA), Sasha Kosovichev (Stanford, USA), Scott McIntosh (Boulder, USA), Kris Murawski (UMCS, Poland), Valery Nakariakov (Warwick, UK), Leon Ofman (Goddard, USA), del Toro Iniesta (Granada), Pawel Rudawy (UW, Poland), Brigitte Schmieder (France), Sami Solanki (MPI, Germany), Alan Title (LMSAL, USA)

LOCAL ORGANISING COMMITTEE:

Kris Murawski, Pawel Rudawy, Michal Tomczak, Wiesław M. Macek, Janusz Sylwester, Arkadiusz Berlicki